feedback control system 42 during the injection molding process.

Claim 1 is directed to a mold clamping control device for use in an injection molding machine that includes a first sensor, a second sensor, a target value generator and a mold clamping control unit. The first sensor detects a relative position between a movable platen and a fixed platen to produce a detected platen position. The second sensor detects a mold clamping force exerted on a mold clamped by the movable platen and the fixed platen to produce a detected mold clamping force. The target value generating generates a target value between the movable platen and the fixed platen as a target platen position value and generating a target mold clamping force value. The mold clamping control unit calculates a position deviation and a mold clamping deviation. The mold clamping control unit then selectively controls a mold clamping motor based upon either the position deviation or the mold clamping deviation.

It is respectfully submitted that the rejection is improper because the applied art fails to teach each element of the claimed invention. Specifically, the applied art fails to teach a mold clamping control device. In fact, Hiraoka is absent any teachings regarding relative positions and control of a movable platen and a fixed platen of a mold. As a result, the applied art fails to teach the first sensor, the second sensor, the target value generator and the mold clamping control unit as a mold clamping control device claimed in claim 1.

Hiraoka does teach pressure detection. However, the pressure detection is related to the molten resin as it fills the mold. Such pressure detection is detected through the screw (see col. 4, lines 13-26). Hiraoka also teaches position detection. However, the

position detection signal is differentiated to produce a velocity detection signal representing movement velocity of the screw. (See col. 4, lines 53-61). Neither the pressure detection nor the position detection is associated with a mold and its platen components. Further, pressure detection nor position detection taught in Hiraoka relates to mold clamping. Therefore, claim 1 is allowable over the applied art.

Similar to claim 1, claim 14 is directed to a method for controlling mold clamping in an injection molding machine. For the reasons discussed above for claim 1, there is no teachings in the applied art related to controlling mold clamping. As stated above, the applied art teaches a control unit for controlling injection of resin into a mold of an injection molding machine. For the reasons discussed above, claim 14 is also allowable over the applied art.

Claims 2-13 depend from claim 1 and include all of the features of claim 1. Claims 15-26 depend from claim 14 and include all of the features of claim 14. Thus, the dependent claims are allowable at least for the reasons the independent claims are allowable as well as for the features they recite. Particularly, claims 2-13 recite features of the mold clamping control unit which is not present in the applied art. Claims 15-26 recite features related to a mold clamping motor which is absent in the applied art. For these additional reasons, the dependent claims are allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully solicited. Should the Examiner believe anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed

below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper to Counsel's Deposit Account 01-2300.

Respectfully submitted,

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Enclosures: Marked-Up Copy of Amended Claims
Petition for Extension of Time (one month)

MARKED-UP COPY OF AMENDED CLAIMS

1. (Amended) A mold clamping control device for use in an injection molding machine having a screw for injecting molten resin into a mold, said mold clamping control device comprising:

a first sensor detecting a relative position between a movable platen and a fixed platen to produce a detected platen position;

a second sensor detecting a mold clamping force exerted on [a] the mold clamped by the movable platen and the fixed platen to produce a detected mold clamping force;

a target value generator generating a target value between the movable platen and the fixed platen as a target platen position value and generating a target mold clamping force value; and

a mold clamping control unit for calculating a position deviation and a mold clamping deviation, the position deviation being a deviation between the target platen position value and the detected platen position, the mold clamping deviation being a deviation between the target mold clamping force value and the detected mold clamping force, said mold clamping control unit being configured to selectively control a mold clamping motor based upon one of the position deviation and the mold clamping deviation.

10. (Amended) A mold clamping control device as claimed in Claim 2, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control

command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, [the injection molding machine comprising a screw for injecting the molten resin,] and wherein said mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.

11. (Amended) A mold clamping control device as recited in Claim 3, wherein the relative position between the movable platen and the fixed platen is a platen position, [the injection molding machine comprising a screw for injecting the molten resin,] and wherein the mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.

12 (Amended) A mold clamping control device as claimed in Claim 4, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen

position is defined as a first control command value for the motor, and the control command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, [the injection molding machine comprising a screw for injecting the molten resin,] and wherein said mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.

13. (Amended) A mold clamping control device as claimed in Claim 5, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, [the injection molding machine comprising a screw for injecting the molten resin,] and wherein said mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping control device further

comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.